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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,362

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Dominique Michel

LP-2002

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217 7590 02/14/2011  
FISHER, CHRISTEN & SABOL  
P.O. Box 18385  
WASHINGTON, DC 20036

EXAMINER

YOUNG, SHAWQUA

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

02/14/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/520,362	MICHEL, DOMINIQUE	
	<b>Examiner</b>	<b>Art Unit</b>	
	SHAWQUIA YOUNG	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7,21-24 and 31-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 and 36-38 is/are allowed.
- 6) ☒ Claim(s) 1,3-7,21-24,33,35 and 39 is/are rejected.
- 7) ☒ Claim(s) 2,31,32 and 41-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/10/11</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-7, 21-24 and 31-44 are currently pending in the instant application. Claims 1, 3-7, 21-24, 33, 35 and 39 are rejected, claims 2, 31, 32 and 41-44 are objected and claims 34 and 36-38 are allowed in this Office Action.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 10, 2011 has been entered.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on January 10, 2011 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***I. Response to Arguments/Remarks***

Applicants have not filed any new arguments or amendments in response to the previous Final rejection mailed on July 7, 2010. Thus the pending 103 rejection of claims 1, 3-7, 21-24, 33, 35 and 39 are rejected under 35 U.S.C. § 103(a) as being

Art Unit: 1626

unpatentable over *Hill, et al.* in view of Matsumoto and the objection of claims 2, 31, 32 and 41-44 are objected to as being dependent upon a rejected based claim have been maintained in this Office Action.

## II. ***Rejection(s)***

### 35 USC § 103 - OBVIOUSNESS REJECTION

The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

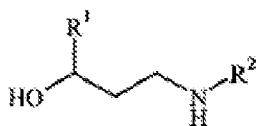
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*Graham v. John Deere Co.* set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. §103(a). *See Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

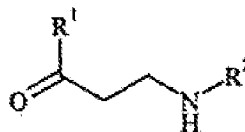
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-7, 21-24, 33, 35 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hill, et al.* in view of Matsumoto. Applicants claim The instant invention claims a process for the preparation of a compound of formula

Art Unit: 1626



and/or an addition salt of a proton acid, wherein  $R^1$  represents  $C_{1-8}$ -alkyl or phenyl and  $R^2$  represents alkyl, cycloalkyl, aryl or aralkyl, each aryl or aralkyl being optionally further substituted with alkyl, alkoxy and/or halogen which process comprises the following steps: a) reacting a mixture comprising: (i) a methyl ketone of formula:  $CH_3COR^1$  wherein  $R^1$  is as defined above, and (ii) a compound of formula:  $H_2N-R^2$  and/or an addition salt of proton acid, wherein  $R^2$  is as defined above, and (iii) formaldehyde or a source of formaldehyde selected from the group consisting of formaldehyde in aqueous solution, 1,3,5-trioxane, paraformaldehyde and mixtures thereof, in the presence of a solvent selected from the group consisting of water, aliphatic alcohols, cycloaliphatic alcohols and mixtures thereof and optionally a proton



acid to provide a  $\beta$ -keto amine of the formula and/or an addition salt of a proton acid and b) reducing the carbonyl group of  $\beta$ -keto amine to afford a compound of formula I and/or an addition salt of a proton acid wherein the step a) is carried out at a pressure above 1.5 bar.

**The Scope and Content of the Prior Art (MPEP §2141.01)**

Art Unit: 1626

*Hill, et al.* teaches the following method



wherein a)  $(\text{HCHO})_n$ ,  $\text{MeNH}_2$

$\text{HCl}$ ,  $\text{EtOH}$ ,  $\text{HCl}$ , reflux; b)  $\text{H}_2\text{O}$ , steam distillation,  $\text{MeOH}$ ; c)  $\text{NaBH}_4$ , 2-propanol/ $\text{H}_2\text{O}$ ; d)  $\text{MeOH}$ ,  $\text{HCl}$ ;  $\text{EtOH}/\text{Me}_2\text{CO}$ ;  $\text{R}$  is  $\text{H}$  or  $\text{Cl}$ .

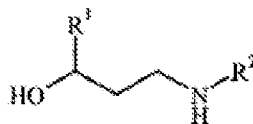
The secondary reference, *Matsumoto*, teaches the use of high pressure in the Mannich reaction of ketones and esters with dichloromethane and secondary amines. The secondary references teaches various reactions such as reacting  $\text{PhCOCH}_2\text{CH}_3$  with  $(\text{Et})_2\text{NH}$  under high pressure.

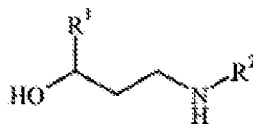
**The Difference Between the Prior Art and the Claims (MPEP §2141.02)**

The difference between the prior art of *Hill, et al.* and the instant invention is that there is that step a) in the instant application is carried out at a pressure above 1.5 whereas in the prior art primary reference the first step is carried out under reflux and then steam distillation.

**Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)**

In *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955), it was well established that merely modifying the process conditions such as temperature and concentration is not a patentable modification absent a showing of criticality. For example, it is obvious



to modify the preparation of a compound of  comprising step a) and step b) as disclosed in claim 1 to improve the product yield since a similar reaction using different conditions in step 1 was already taught by the primary reference and the use of high pressure in the Mannich reaction was taught by the secondary reference. Specifically, changing the reaction conditions of step 1 as seen in the claim 1 absent unexpected results is deemed obvious over the *Hill, et al.* reference in view of the secondary reference Matsumoto. The motivation for one of ordinary skill in the art to modify the first step of the prior art's reaction by using high pressure would be to develop a more efficient method for preparing amino alcohols. Therefore, it would have been prima facie obvious to one having ordinary skill in the art at the time the invention was made to attempt to improve the known process by modifying the reaction conditions (i.e. carrying out the first step under pressure) to increase the product yield when the secondary reference teaches the Mannich reaction of ketones and esters with dichloromethane and secondary amines under high pressure. A strong prima facie obviousness has been established.

### III. ***Objection(s)***

#### *Dependent Claim Objections*

Dependent Claims 2, 31, 32 and 41-44 are objected to as being dependent upon a rejected based claim. To overcome this objection, Applicant should rewrite said claims in an independent form and include the limitations of the base claim and any intervening claim.

#### **IV. Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 7:00 AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shawquia Young/

Examiner, Art Unit 1626



Application/Control Number: 10/520,362  
Art Unit: 1626

Page 8